

REMARKS

Claims 34-40, and 42 are in the application. Claims 1-33 and claim 41 have been cancelled.

By this amendment, applicants have amended claims 34, 35 and 40 to more clearly set forth applicant's invention. FIG. 4 and 5 support the changes made to the claims.

Response to 35 U.S.C. §112 Rejections

Claim 41 was rejected under 35 USC §112, first paragraph, as failing to comply with the written description requirement. Claim 41 has been cancelled so this rejection is now moot.

Claim 40 was rejected under 35 USC §112, second paragraph as being indefinite. Specifically, the claimed limitation "the matrix of pillars" was deemed to be unclear as to whether the matrix of pillars is the same matrix recited in claim 39. The matrix is the same and thus the claim has been amended to use the exact same terminology - a "matrix of a plurality of pillars" is referenced instead of "matrix of pillars." The rejection is believed to be overcome by this amendment.

Response to 35 U.S.C. §102 Rejections

Claims 34 and 38-41 were rejected under 35 U.S.C. §102(e) as being anticipated by Lur et al. (USP 5,640,041). This rejection is traversed in view of the amendments made herein and the remarks presented hereinafter.

Claim 34 now calls for, among other things, an intermediary of a semiconductor device including a plurality of polysilicon cap layers having a lower surface formed adjoining and overlying each of the plurality of pillars, wherein the lower surface of the polysilicon cap layers is aligned with a top surface of each of the plurality of voids.

Applicants respectfully submit that Lur does not show nor make obvious a plurality of polysilicon cap layers having a surface formed adjoining and overlying each of the plurality of pillars. Lur shows a structure wherein a single polysilicon layer 5 overlies a plurality of pillars as a group, not a plurality of polysilicon cap layers overlying each of the plurality of pillars. Some of the pillars in Lur do not have any polysilicon layer 5 overlying them and only a single polysilicon layer is shown, not a plurality of polysilicon layers. Thus, Lur does not anticipate applicant's claim 34.

Furthermore, applicant's claim 34 now calls for the lower surface of the polysilicon cap layers to be aligned with a top surface of each of the plurality of voids. Lur also does not show this claimed feature, as indicated in the Office Action. Lur's lower surface of polysilicon layer 5 is not aligned with the top surface of each of the plurality of voids. Lur shows a single polysilicon layer 5 which is deposited over numerous voids as a group and not aligned with each void.

For at least the above reasons, Applicants' claims are believed to be allowable over the relied on reference.

Claims 38-40 depend from claim 34 and are believed allowable for at least the same reasons as claim 34. The Examiner states that Lur shows a matrix of pillars, however, Lur only states that a "set" of trenches are formed. Applicants respectfully submit that a set of trenches is not the same as a matrix of a plurality pillars, as claimed by applicants in claim 39.

Claim 41 has been cancelled by this amendment.

Response to 35 U.S.C. §103 Rejections

Claims 35-37 and 42 were rejected under 35 U.S.C. §103(a) as being unpatentable over Lur. In view of the amendments and arguments presented above and the dependence of these claims on claim 34, applicants respectfully submit that claims 35-37 and 42 are allowable over Lur for at least the same reasons as claim 34. Lur does not make obvious claim 34 because someone skilled in the art would not, with the teaching of Lur, come up with applicant's claimed invention. There is not believed to be any reason or motivation to alter the structure of Lur to make it the same as applicant's claimed structure of claim 34. For at least the above reasons, applicant's claims 35-37 and 42 are believed to be allowable over the relied on reference.

If there are any remaining matters that can be resolved by telephone conference, applicants' undersigned attorney invites Examiner Nadav to contact him at the Examiner's convenience at 602.244.4885.

In view of the above, it is believed that the claims are allowable, and the case is now in condition for allowance, which action is earnestly solicited.

Respectfully submitted,

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